PROVISIONAL APPLICATION

This invention provides a means of forming a concrete column and footing at the same time.

METHOD CURRENTLY BEING USED, PROBLEMS WITH METHOD

Steel piers and concrete footings are currently being used to support modular and HUD code buildings as shown in **Figure 1**. The pier is suspended from the bottom of the building with the pier's base about three inches off the ground. A fabric bag, with an opening on the top, and a tie string around the opening, is tied tight around the base of the steel pier. Concrete is pumped into the bag, encapsulating the base of the pier to form a concrete footing.

The problem is that various heights must be accommodated in the field, and this necessitates keeping a large inventory of steel piers with different heights, usually with 2" height increments.

DESCRIPTION OF THE INVENTION

This invention proposes to extend the top of the footing bag with a fabric tube. With this method, the number of different sized steel piers can be reduced significantly; and in one embodiment of the invention, the steel pier is eliminated.

EMBODIMENTS OF THE INVENTION

1. Using the Tube and Bag with a Steel Pier (Figure 2)

With this embodiment, a fabric tube would be sewn to the opening of the forming bag. The diameter of the tube would be the same as that of the opening in the bag. Along the top of this tube would be a second tie cord. Hence either the lower cord or the upper cord could be attached to the base of the steel pier. The height of the tube could be (for example) about 6", thereby eliminating three different heights of steel piers.

2. Using the Tube and Bag under a Steel I-Beam without a Steel Pier (Figure 3)

This embodiment would consist of the following:

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a. Fabric tube and bag, joined together to enable pouring of both the footing and column at the same time;

b. A metal support assembly, which would hold the fabric tube in a vertical position at the correct height. This assembly would be attached to the building's I-beam. The fabric tube would be sandwiched between a two-part sheet metal support assembly to hold the tube correctly.

c. Concrete would be pumped in the top of the tube, thereby filling the footing bag first, and then the fabric tube. This would enable the load from the I-beam to be transferred to the ground below.

d. After several days, when the concrete has hardened sufficiently, the installer would come back and use the adjustment nut to level up the I-beam.

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3. Using the Tube and Bag under a Rim Joist without a Steel Pier using a Wood Support (Figure 3)

This embodiment would consist of the following:

a. Fabric tube and bag, joined together to enable pouring of both the footing and column at the same time. The fabric tube would have a fabric tab several inches in width, running continuously the tube's full height (for stapling to the wooden support member);

b. A temporary support member (perhaps made of wood) screwed to the rim joist, and extending vertically downwards to the top of the footing form.

c. The tube tab would be stapled in position to the side of the temporary wooden support member so that the tube and footing form is held in correct position. It may be necessary to attach a second wood support adjacent to the first to prevent the tube from swinging horizontally;

d. Using a small grout pump, concrete would be pumped into the top of the fabric tube, up to the bottom of the rim joist so that the loads from the floor system will be transferred to the concrete, down to the ground below.

e. The next day or so, the temporary supports would be removed to enable the installation of skirting adjacent to the concrete columns.

4. Using the Tube and Bag under a Rim Joist without a Steel Pier using a Steel Support

This embodiment would consist of the following (see Figure 4):

a. Fabric tube and bag, joined together to enable pouring of both the footing and column at the same time;

b. A support member made of sheet metal is screwed to the rim joist, and extending vertically downwards. This member could incorporate an anchor entering the concrete to tie the building to the concrete column.

c. The fabric tube would be cut to the correct length, and slid over the support member. A cap would then be attached to the support member, sandwiching the fabric tube between the two in the correct

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position. The support member could also assist in transferring the floor loads to the concrete column, as well as reinforce the concrete;

d. Using a small grout pump, concrete would be pumped into the top of the fabric tube, right up to the bottom of the rim joist so that the loads from the floor system are transferred to the concrete, down to the ground below.

e. Following the concrete pour, skirting would then be affixed to the outside of the concrete columns.

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